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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Atty. Docket: LUBOMIRSKY=1

In re Application of:	)	Confirmation No.: 2902
Igor LUBOMIRSKY	)	Art. Unit: 1751
Appln. No.: 10/560,107	)	Examiner:
Filed: December 9, 2005	)	Washington, D.C.
For: PYROELECTRIC COMPOUND AND	)	March 28, 2006
METHOD OF ITS PREPARATION	)	

INFORMATION DISCLOSURE STATEMENT [IDS]

Customer Service Window, Mail Stop Amendment  
Honorable Commissioner for Patents  
U.S. Patent and Trademark Office  
Randolph Building  
401 Dulany Street  
Alexandria, Virginia 22314

Sir:

This Information Disclosure Statement is submitted in accordance with 37 CFR §§1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

1. This IDS should be considered, in accordance with 37 CFR §1.97, as it is filed before the mailing date of a first office action on the merits.

2. In accordance with 37 CFR §1.98, this IDS includes a list (e.g., form BN/SB/08A/B) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. Other than U.S. patent(s) and/or published U.S. application(s), which 37 CFR §1.98(a)(2)(ii) does not

require to be filed unless specifically required by the Office, a copy of each document listed is attached.

3. Document(s) AE is not in the English language. In accordance with 37 CFR §1.98(a)(3), Applicant states:

[XX]An English translation of document DE 100 28 022 A1 (or of the pertinent portions thereof), or a copy of an English-language abstract (or claim) is enclosed.

4. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 and 68 in the preamble to the final rules; 1135 OG 13 at 20).

5. Other information being provided for the examiner's consideration follows:

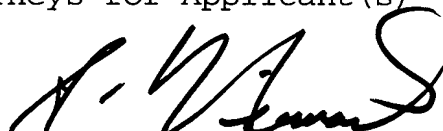
*International Search Report*

6. In accordance with 37 CFR §§1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in 37 CFR §1.56(b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.

Respectfully submitted,

BROWDY AND NEIMARK  
Attorneys for Applicant(s)

By:

  
\_\_\_\_\_  
Sheridan Neimark  
Registration No. 20,520

SN:kg  
624 Ninth Street, N.W., Suite 300  
Washington, D.C. 20001-5303  
Telephone: (202) 628-5197  
Facsimile: (202) 737-3528  
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BN/SB/08A/B

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 1 of 4

**Complete if Known**

Application Number	10/560,107
Filing Date	December 9, 2005
First Named Inventor	Igor LUBOMIRSKY
Group Art Unit	1751
Examiner Name	
Attorney Docket Number	LUBOMIRSKY=1

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	AA	US-5,504,330	04-02-1996	Summerfelt et al	
	AB	US-5,127,982	07-07-1992	Kotake	
	AC	US-4,869,840	09-26-1989	Osbond et al	
	AD	US-4,500,397	02-19-1985	Mori	
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FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	AE	DE	100 28 022 A1	12-13-2001	Krueger et al		ABS
		</					

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**NON PATENT LITERATURE DOCUMENTS / OTHER INFORMATION**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	AF	s. Li, J. A. Eastman, Z. Li, C. M. Foster, R. E. Newnham, and L. E. Cross, "Size effects in nanostructured ferroelectrics", <i>Phys. Lett. A</i> <b>1996</b> , 212, 341-346.	
	AG	N. A. Pertsev, A. G. Zembilgotov, and A. K. Tagantsev "Effect of Mechanical Boundary Conditions on Phase Diagrams of Epitaxial Ferroelectric Thin Films", <i>Phys. Rev. Lett.</i> <b>1998</b> , 80, 1998-1991.	
	AH	T. Feng and J. M. Cowley, "Thickness dependence of ferroelectric domains in thin crystalline films", <i>Appl. Phys. Lett.</i> <b>1994</b> , 65, 1906-1908.	
	AI	M. H. Frey and D. A. Payne, "Grain-size effect on structure and phase transformations for barium titanate", <i>Phys. Rev. B</i> <b>1996</b> , 54, 3158-3167.	
	AJ	G. Ayton, M. J. P. Gingras, and G. N. Patney, "Orientational Ordering on Spatially Disordered Dipolar Systems", <i>Phys. Rev. Lett.</i> <b>1995</b> , 75, 2360-2363.	
	AK	P. J. Groout, N. H. March, and Y. Ohmura, "Low-temperature behavior of Pyroelectric glasses", <i>Appl. Phys. Lett.</i> <b>1978</b> , 32, 453-454.	
	AL	A. M. Glass, M. E. Lines, K. Nassau, and J. W. Shiever, "Anomalous dielectric behavior and reversible pyroelectricity in roller-quenched LiNbO <sub>3</sub> glass", <i>Appl. Phys. Lett.</i> <b>1977</b> , 31, 249-251.	
	AM	Y. H. Xu, C. H. Cheng, and J. D. Mackenzie, "Electrical characterizations of polycrystalline and amorphous thin films of Pb(Zr <sub>x</sub> Ti <sub>1-x</sub> )O <sub>3</sub> and BaTiO <sub>3</sub> prepared by sol-gel technique", <i>J. Non-Cryst Solids</i> <b>1994</b> , 176, 1-17.	
	AN	K. Sreenivas, A. Mansingh, and M. Sayer, "Structural and electrical properties of rf-sputtered amorphous barium titanate thin films", <i>J. Appl. Phys.</i> <b>1987</b> , 62, 4475-4481.	
	AO	B. S. Chiou and M. C. Lin, "Electrical properties of amorphous barium titanate films prepared by low power r.f. sputtering", <i>Thin Solid Films</i> <b>1994</b> , 248, 247-252.	
	AP	W. T. Liu, S. T. Lakshmikummar, D. B. Knorr, E. J. Rymaszewski, T. M. Lu, and H. Bakhru, "Thermally stable amorphous Ba <sub>x</sub> Ti <sub>2-x</sub> O <sub>y</sub> thin films", <i>Appl. Phys. Lett.</i> <b>1995</b> , 66, 809-811.	
	AQ	M. N. Kamalasanan, N. D. Kumar, and S. Chandra, "Structural and microstructural evolution of barium titanate thin films deposited by the sol-gel process", <i>J. Appl. Phys.</i> <b>1994</b> , 76, 4603-4609.	

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	AR	A. A. Lipovskii, D. K. Tagantsev, A. A. Vetrov, and O. V. Yanush, "Raman spectroscopy and the origin of electrooptical Kerr phenomenon in niobium alkali-silicate glasses", <i>Optical Materials</i> <b>2003</b> , 21, 749-757.	
	AS	A. K. Tagantsev, "Electrical polarization in Crystals and Its Response to Thermal and Elastic Perturbations", <i>Phase Transitions</i> <b>1991</b> , 35, 119-203.	
	AT	W. L. Warren, G. E. Pike, K. Vanheusden, D. Dimos, B. A. Tuttle, and J. Robertson, "Defect-dipole alignment and tetragonal strain in ferroelectrics", <i>J. Appl. Phys.</i> <b>1996</b> , 79, 9250-9257.	
	AU	D. M. Kozuch, M. Stavola, S. J. Spector, S. J. Pearton, and J. Lopata, "Symmetry, stress alignment, and reorientation kinetics of the Si <sub>As</sub> -H complex in GaAs", <i>Phys. Rev. B</i> <b>1993</b> , 48, 8751-8756.	
	AV	L. Nam Yang, T. Sekine, Y. Ito, and K. Uchino, "Deposition Profile of RF-Magnetron-Sputtered BaTiO <sub>3</sub> Thin films", <i>Jpn. J. Appl. Phys.</i> <b>1994</b> , 33, 1484-1488.	
	AW	G. G. Stoney, "The Tension of Metallic Films deposited by Electrolysis", <i>Proc. R. Soc. London</i> <b>1909</b> , A82, 172-175.	
	AX	A. G. Chynoweth, "Dynamic Method for Measuring the Pyroelectric Effect with Special Reference to Barium Titanate", <i>Appl. Phys. Lett.</i> <b>1956</b> , 27, 78-84.	
	AY	B. R. Holeman, "Sinusoidally Modulated Heat Flow And The Pyroelectric Effect", <i>Infrared Physics</i> <b>1972</b> , 12, 125-135.	
	AZ	N. Stavitski, V. Lyahovitskaya, J. Nair, I. Zon, R. popovitz-Biro, E. Wachtel, Y. Feldman, and I. Lubomirsky, "Substrate-free crystallization of distorted Hexagonal barium titanate thin films", <i>Appl. Phys. Lett.</i> <b>2002</b> , 81, 4177-4179.	
	BA	O. Kolosove, A. Gruverman, J. Hatano, K. Takahashi, and H. Tokumoto, "Nanoscale Visualization and Control of Ferroelectric Domains by Atomic Force Microscopy", <i>Phys. Rev. Lett.</i> <b>1995</b> , 74, 4309-4312.	
	BB	Robertson, J. Warren, "Band states and shallow hole traps in Pb(Zr,Ti)O <sub>3</sub> ferroelectrics", W.L. & Tuttle, B.A. in <i>Journal of Applied Physics</i> 3975-3980-3980 (1995).	
	BC	Ayton, G. Gingras, M.J.P. & Patey, G.N., "Ferroelectric and dipolar glass phases of noncrystalline systems". <i>Phys. Rev. E</i> <b>56</b> , 562-570 (1997).	

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Igor LUBOMIRSKY

Group Art Unit

1751

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Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published

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BC

Baghat, A.A. & Kamel, T.M., "Possible observation of a glassy ferroelectric:  $\text{Bi}_{1.8}\text{Pb}_{0.3}\text{Sr}_2\text{Ca}_2\text{Cu}_{2.8}\text{K}_{0.2}\text{O}_z$ " *Phys. Rev. B* **63**, art. No.-012101-1 – 012101-4 (2001).

BE

Libomirsky et al "Observation of self-poling in BaTiO<sub>3</sub>", Journal of Applied Physics, Vol. 85(9), pp 6690-6694, May 1999 (Abstract only)

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